

I Claim:

1. A method of inducing apoptosis in cancer cells by administering alpha 1-acid glycoprotein to said cancer cells.

2. The method of claim 1 wherein said alpha 1-acid glycoprotein has been charged with zinc.

3. A method of inducing apoptosis in cancer cells by administering alpha 2-HS glycoprotein to said cancer cells.

4. The method of claim 3 wherein said alpha 2-HS glycoprotein has been charged with zinc.

5. A method of inducing apoptosis in cancer cells by administering alpha 1-antitrypsin to said cancer cells.

6. The method of claim 5 wherein said alpha 1-antitrypsin has been charged with zinc.

7. A method of inducing apoptosis in cancer cells by administering a peptide fragment of alpha 1-acid glycoprotein to said cancer cells.

8. The method of claim 7 wherein said peptide fragment of alpha 1-acid glycoprotein has been charged with zinc.

9. A method of inducing apoptosis in cancer cells by administering a peptide fragment of alpha 2-HS glycoprotein to said cancer cells.

10. The method of claim 9 wherein said peptide fragment of alpha 2-HS glycoprotein has been charged with zinc.

11. A process for preparing zinc charged alpha 1-acid glycoprotein which is suitable for treatment on cancer cells comprising:

- a. incubating said alpha 1-acid glycoprotein in solution with a
5 chelating agent;
- b. isolating naked alpha 1-acid glycoprotein from step a;
- c. incubating said naked alpha 1-acid glycoprotein in solution with Zinc Acetate; and
- d. isolating zinc charged alpha 1-acid glycoprotein from the
10 solution in step c.

12. A process for preparing zinc charged alpha 2-HS glycoprotein, which is suitable for treatment on cancer cells comprising:

- a. incubating said alpha 2-HS glycoprotein in solution with a chelating agent;
- 15 b. isolating naked alpha 2-HS glycoprotein from step a;
- c. incubating said naked alpha 2-HS glycoprotein in solution with Zinc Acetate; and
- d. isolating zinc charged alpha 2-HS glycoprotein from the solution in step c.

20 13. A process for preparing zinc charged alpha 1-antitrypsin, which is suitable for treatment on cancer cells comprising:

- a. incubating said alpha 1-antitrypsin in solution with a chelating agent;
- b. isolating naked alpha 1-antitrypsin from step a;
- 25 c. incubating said naked alpha 1-antitrypsin in solution with Zinc Acetate; and

d. isolating zinc charged alpha 1-antitrypsin from the solution in step c.

14. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 1-acid glycoprotein comprising the following steps:

a. incubating said alpha 1-acid glycoprotein in solution with a chelating agent;

b. isolating naked alpha 1-acid glycoprotein from step (a);

c. incubating said naked alpha 1-acid glycoprotein in solution with zinc;

d. isolating zinc charged alpha 1-acid glycoprotein from the solution created in step (c);

e. drying said zinc charged alpha 1-acid glycoprotein from step (d);

f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.

15. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 2-HS glycoprotein comprising the following steps:

a. incubating said alpha 2-HS glycoprotein in solution with a chelating agent;

b. isolating naked alpha 2-HS glycoprotein from step (a);

c. incubating said naked alpha 2-HS glycoprotein in solution with zinc;

d. isolating zinc charged alpha 2-HS glycoprotein from the solution created in step (c);

e. drying said zinc charged alpha 2-HS glycoprotein from step (d);

f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.

5 16. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 1-acid glycoprotein comprising the following steps:

a. incubating said alpha 1-acid glycoprotein in solution with a chelating agent;

10 b. isolating naked alpha 1-acid glycoprotein from step (a);

c. incubating said naked alpha 1-acid glycoprotein in solution with zinc;

d. isolating zinc charged alpha 1-acid glycoprotein from the solution created in step (c);

15 e. incubating the zinc charged alpha 1-acid glycoprotein from step (d) with papain;

f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.

17. A method of preparing a peptide fragment having apoptotic activity isolated from alpha 2-HS glycoprotein comprising the following steps:

a. incubating said alpha 2-HS glycoprotein in solution with a chelating agent;

b. isolating naked alpha 2-HS glycoprotein from step (a);

25 c. incubating said naked alpha 2-HS glycoprotein in solution with zinc;

d. isolating zinc charged alpha 2-HS glycoprotein from the solution created in step (c);

e. incubating the zinc charged alpha 2-HS glycoprotein from step (d) with papain;

5 f. isolating, from step (e), peptide fragments which have apoptotic activity in cancer cells.